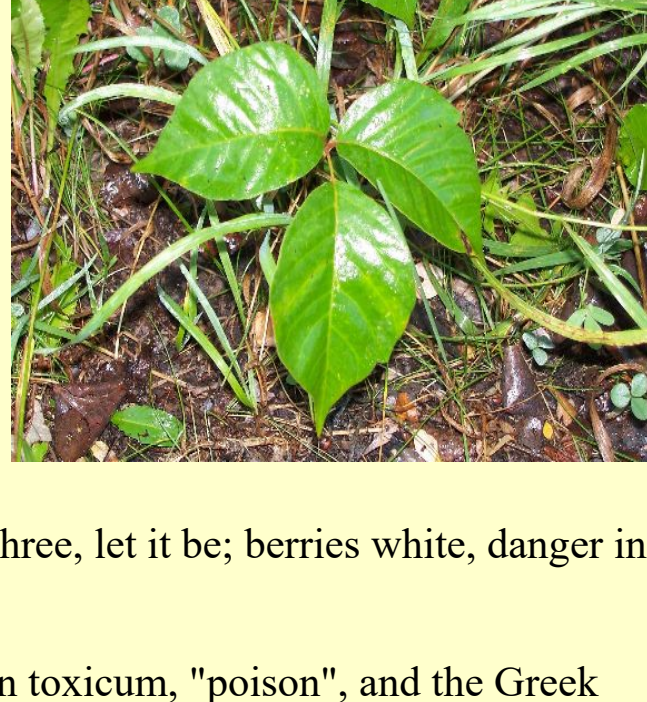


Poison Ivy - Manitoba - by Charles Burchill (*Toxicodendron rydbergii* (Small ex Rydb.) Greene)



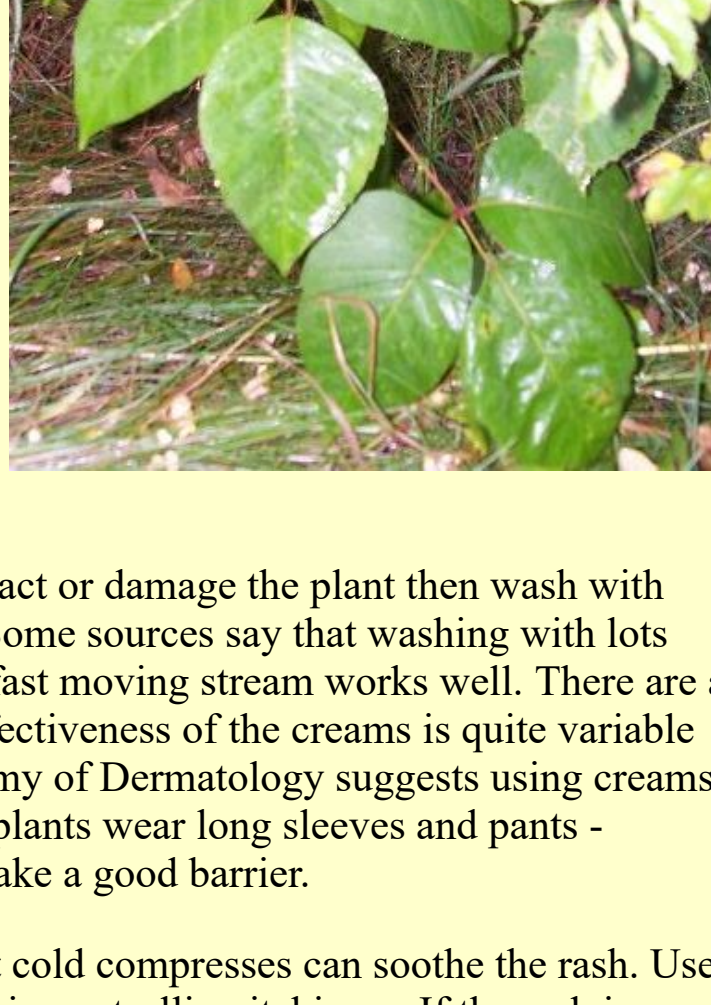
Poison-Ivy is very common across much of southern Manitoba. It is quite variable in size, colour, and leaf shape. It is a short woody stemmed plant with few or no branches typically standing less than 30cm (although in rich moist woodlands specimens of almost a meter have been seen). The leaves, 3-12cm+ in length, are borne near the top of the stem, have long petioles and are divided into three parts. Leaf margins may be lobbed, dentate, or entire. The flowers are tiny white/yellow and grouped in axillary panicles. Berries are clustered off-white (ivory) and usually remain on the stem after the leaves have fallen. In general remember: "Leaves of three, let it be; berries white, danger in sight."



The name comes from: Toxicodendron, from the Latin toxicum, "poison", and the Greek dendron, "tree"; hence "poison tree" rydbergii, from the Latin, "Rydberg's"; named after Per Axel Rydberg (1850-1931), an expert on Western flora. Common names include: Western Poison Ivy, Ryberg's Poison Ivy, Non-Climbing Poison Ivy

Poison-Ivy is common in open woodlands with a moderate amount of sunlight dominated by Bur Oak (*Quercus macrocarpa*), Green Ash (*Fraxinus pennsylvanica*), Green Ash/American Elm (*Ulmus americana*), Bur Oak/Green Ash, or Quaking Aspen (*Populus tremuloides*). Generally it is found along the edges of open or disturbed areas. It grows in a wide range of moisture and soil conditions from dry gravel ridges (where it is relatively small) to rich mesic lowlands with periodic flooding (where the plants reach their largest size).

Poison-Ivy Dermatitis is a delayed hypersensitivity, allergic reaction, caused by contact with the oil urushiol which is released when the plant is damaged (even slightly). Sensitivity to the oil increases with additional exposure - if you have never had the rash count yourself lucky but watch out since you might still get it. Approximately 85 percent of the population will develop an allergic reaction. The rash can appear within a few hours (typical 12-48hrs) or as much as 10 or more days after contact and last as long as 3-4 weeks. Apparently only humans react to poison ivy.



The oil can last a significant period of time on other objects such as garden tools, pet fur, sports equipment, fishing/hunting gear, and clothing. Even handling dried plant material, leaves, roots, etc... can still cause a rash. Smoke from fires with poison-ivy can also cause a reaction in many people. Oozing liquid from rashes does not spread the rash. New rashes are often caused by contacting items that had not been cleaned after the initial exposure. A friend of mine repeatedly suffered from the rash because he had gotten the oil on the steering wheel of his car after working in the field. Every time he drove the car he spread more oil around until he realized what was happening and washed the inside of his car.

The best way to avoid the rash is to recognize the plant and avoid it. If you do contact or damage the plant then wash with soap and lots of water as soon as possible (within 10 minutes) to remove the oils. Some sources say that washing with lots of water is enough and that using soap may spread the oil; swimming or wading in a fast moving stream works well. There are a number of barrier creams made specifically for protection from poison ivy. The effectiveness of the creams is quite variable (59%-9% protection) so do some homework before you buy. The American Academy of Dermatology suggests using creams that contain bentoquatam. If you are in an area where you are likely to contact the plants wear long sleeves and pants - remember to wash your clothes. Wet clothing (including sweat soaked) does not make a good barrier.

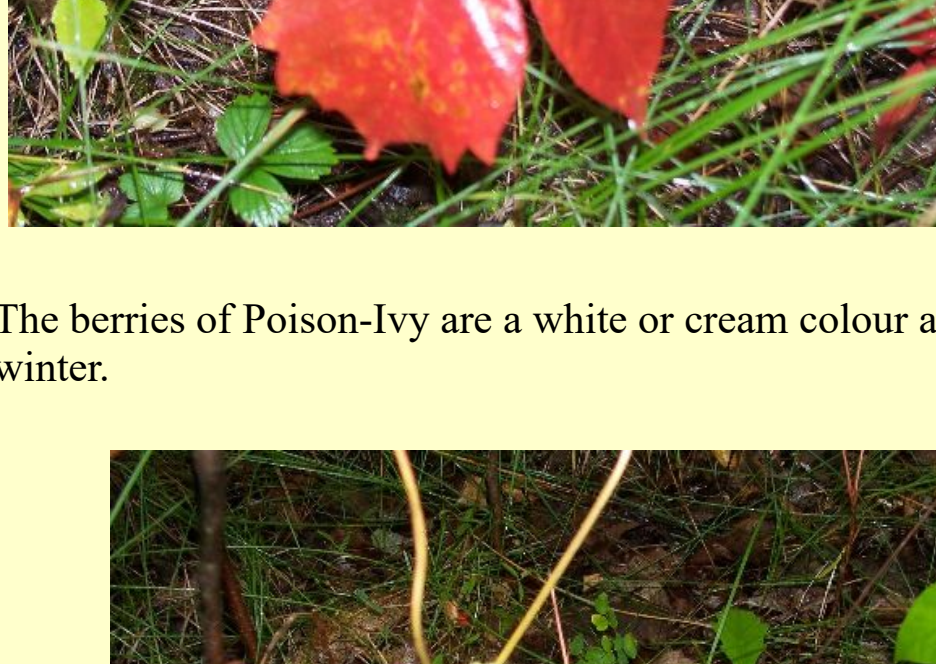
The rash will usually go away on its own, but it can be uncomfortable. Using a wet cold compress can soothe the rash. Use of calamine lotion solution helps dry it out. Oral antihistamines can also be helpful in controlling itchiness. If the rash is severe or on your face or other sensitive areas of your body then you should see a physician. Medications, such as antihistamines and corticosteroids may be prescribed. There are a number of treatments on the market - unfortunately I can't recommend any since I have not used (or even seen) most of them but there may be some useful information from the links or articles below.

TABLE 1. Preventive Therapies

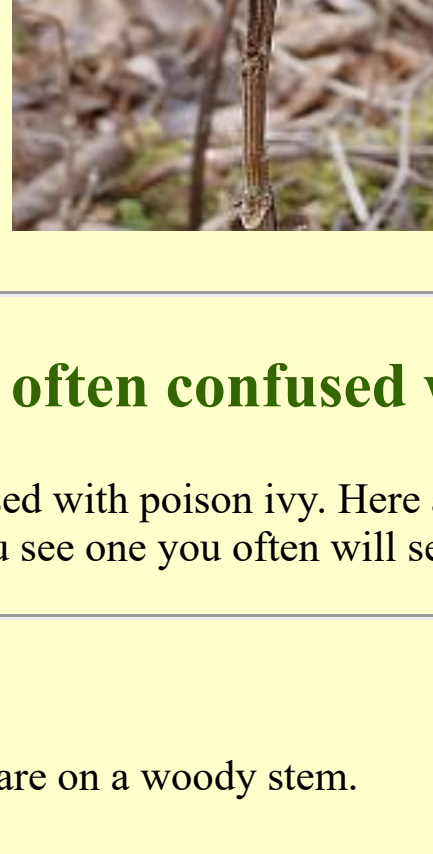
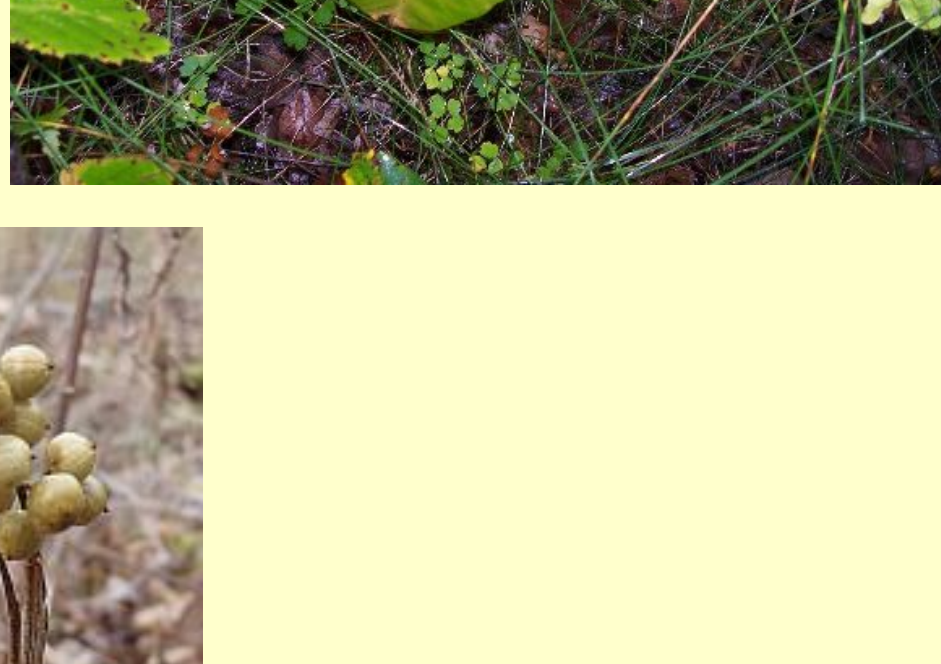
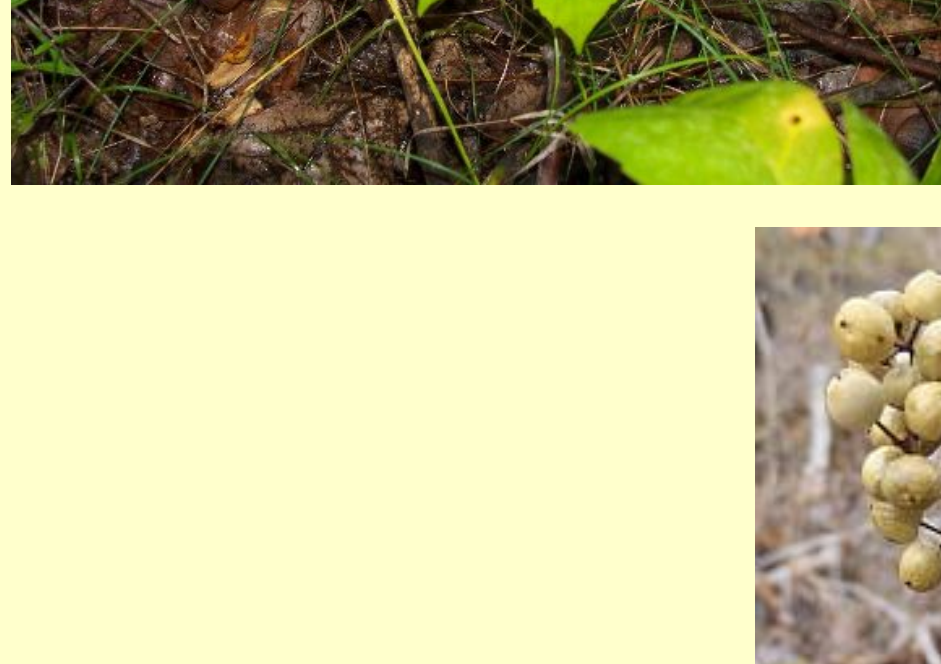
	Mechanism of Action	Efficacy	Limitations	Commercially Available
Tecnu poison ivy wash	Chemical inactivator of urushiol antigen	Significantly reduces dermatitis; no significant difference among 3 products (Stibich et al ³⁵)	Must be used within 2 h of exposure More expensive compared with Dial and Goop	Yes
Goop	Oil-removing compound		Must be used within 2 h of exposure	No
Dial Ultra dishwashing soap	Topical surfactant		Must be used within 2 h of exposure	Yes
Zanfel	Soap mixture of fatty acid, ethoxylate, and lauryl sarcosinate (surfactant)	Significantly reduces dermatitis (Davila et al ³²)	Expensive, must be used soon after exposure	Yes
Jewelweed (<i>I. biflora</i>)	Plant with saponins	Conflicting evidence on efficacy; efficacy may be related to presence of saponin (Long et al ³⁴ , Motz, 2012; Motz et al ³⁵)	Must be used soon after exposure Dash soap (Dawn) is more effective (Motz, 2012 ⁴³)	Yes (soap with jewelweed)
Ivy Block (5% quaternium-18 bentonite)	Organoclay compound that interferes with absorption of allergen by physical blocking	Significantly reduces dermatitis (Marks et al ³⁶)	Must be preemptively applied and reapplied every 4 h, leaves clay residue on skin	Yes
Salts of linoleic acid dimer	Decrease absorption of oils	Significantly prevents dermatitis (Orchard, 1986 ³⁷)	Must be preemptively applied and rinsed off within 8-12 h	No
Hollister Moisture Barrier	Water repellent	Significantly reduces dermatitis severity; no significant difference among 3 products (Grevelink et al ³⁸)	Must be preemptively applied	No, discontinued
Hydapel Stokogard				No No
Oral poison ivy/oak leaves extract	Hyposensitization	Conflicting evidence on efficacy (Epstein, Signore ³⁹ , Gross ⁴⁰ , Stein and Parsons ⁴¹)	Adverse effects from oral administration Large amounts of ingestion required (Epstein ⁴⁴)	Yes homeopathic poison ivy
Oral <i>Rhus</i> antigens (PDC, HDC)	Hyposensitization	Does not significantly induce hypersensitivity to urushiol (Marks et al ³⁷)	Ineffective	No
Vaccine	Hyposensitization	Ongoing investigation	Ongoing investigation	No

from: Kim, Yesul MD, et al. Poison Ivy, Oak, and Sumac Dermatitis: What Is Known and What Is New?. Dermatitis: 5/6 2019 - Volume 30 - Issue 3 - p 183-190

Some Images of Poison Ivy



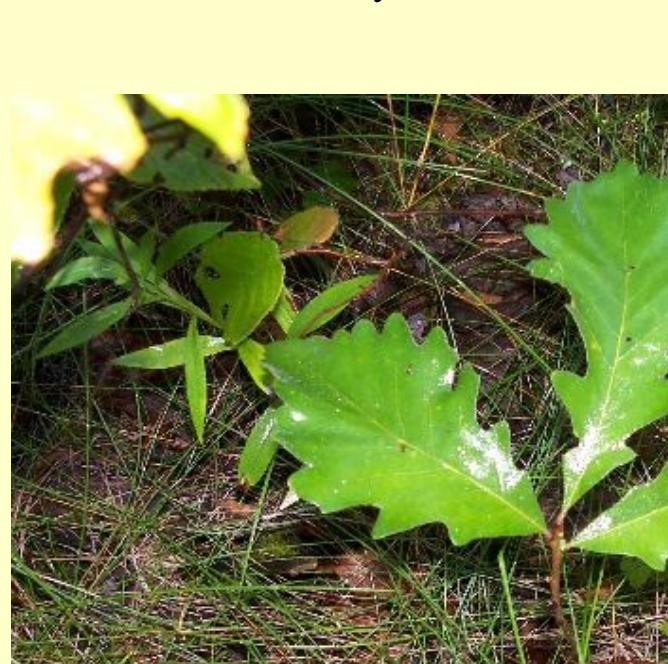
The berries of Poison-Ivy are a white or cream colour and can stay on the short stems from late summer through the fall and winter.



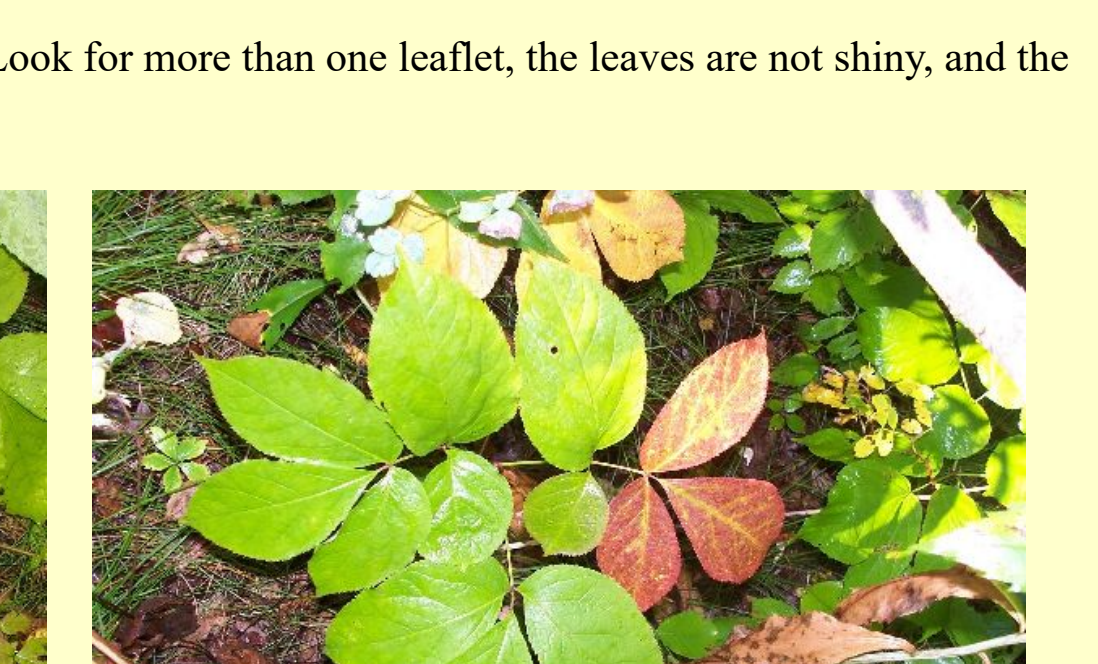
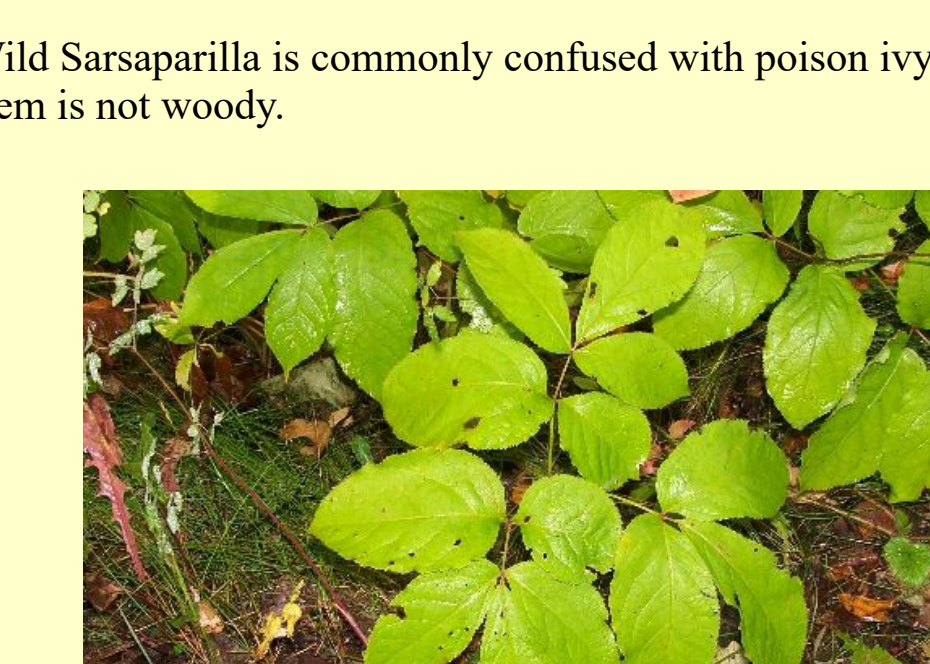
Plants often confused with PI

There are a number of plants that are often confused with poison ivy. Here are a few common examples. All of these plants often grow with or near poison ivy as well - if you see one you often will see the other.

Manitoba Maple Saplings have three leaflets and are on a woody stem.



Bur oak saplings have a woody stem and irregular shaped leaves, but there is only one leaflet.



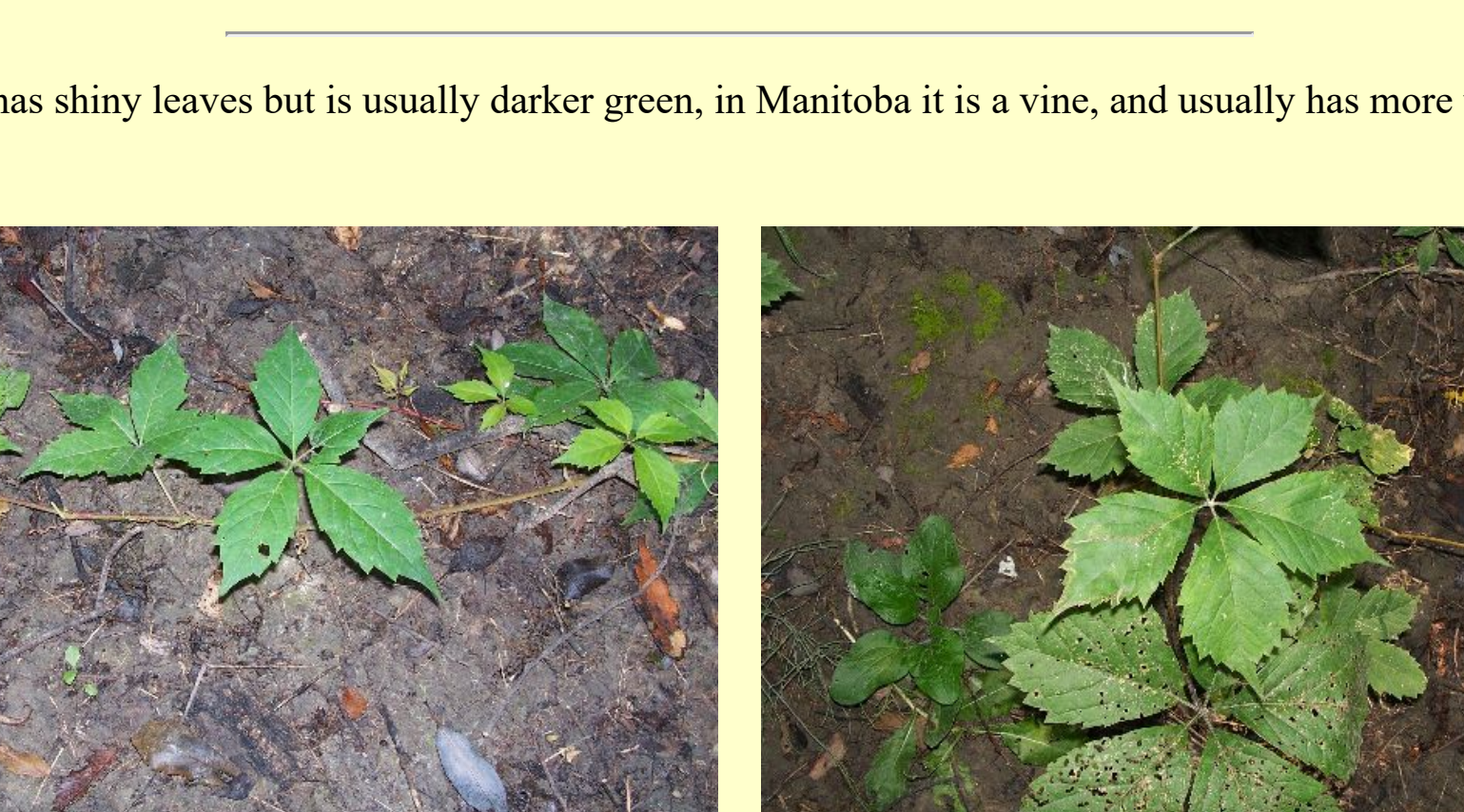
Wild Sarsaparilla is commonly confused with poison ivy. Look for more than one leaflet, the leaves are not shiny, and the stem is not woody.



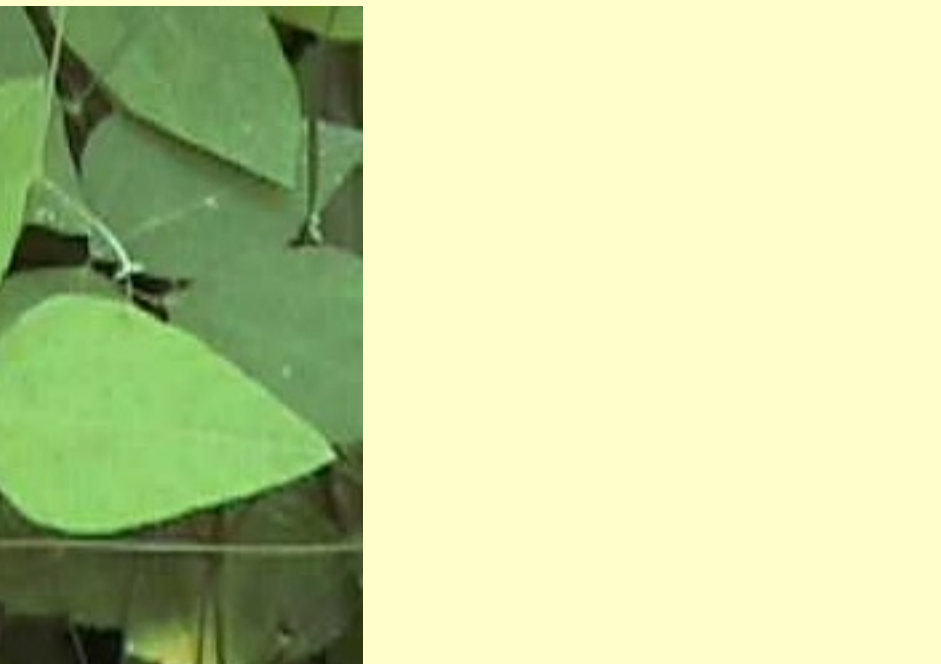
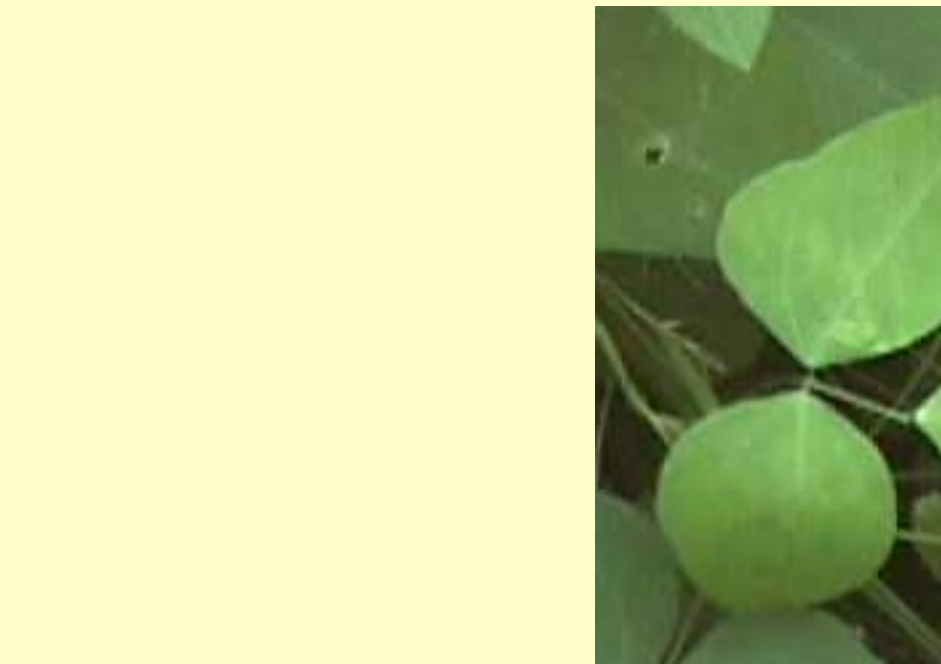
Strawberries are nice to eat and grow close to the ground. They do have three leaflets but the surface is not shiny, and may have a hairy appearance.



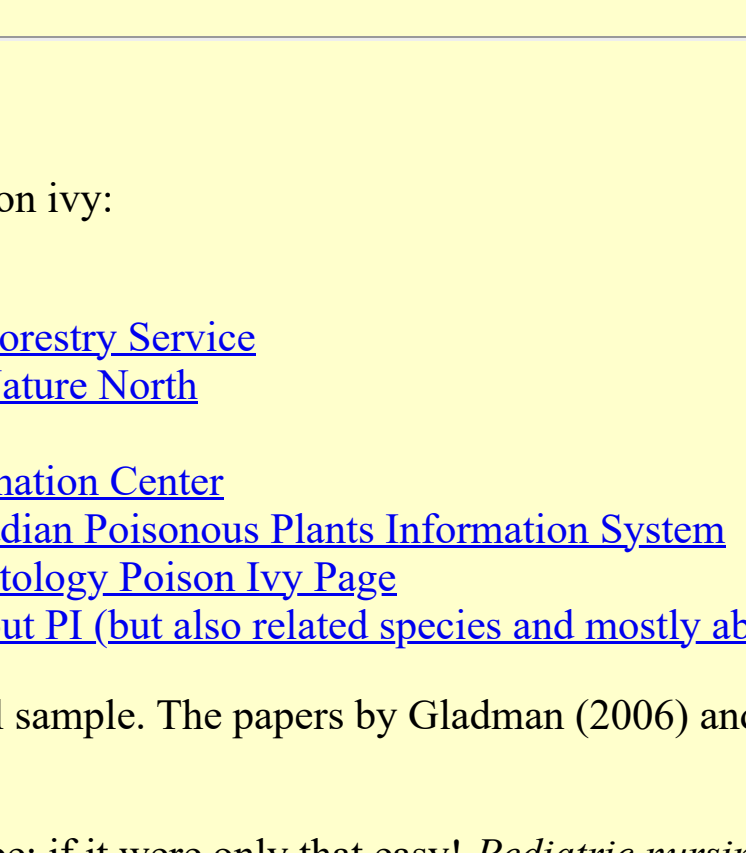
but be careful because sometimes they grow together with PI.



Virginia creeper has shiny leaves but is usually darker green, in Manitoba it is a vine, and usually has more than three leaflets.



Hog peanut also has three leaflets but it does not have a woody stem and is generally smaller.



Other species that might be mistaken include: Boston or Japanese ivy, Fragrant sumac, skunkbush sumac, raspberries, English ivy, Ash seedlings.

Reference Information:

Some websites with information on poison ivy:

- [Health Canada - Poison Ivy Info](#)
- [Toxicodendron rydbergii - USDA Forestry Service](#)
- [The Biology of Poison Ivy from Nature North](#)
- [Poison Ivy from Wikipedia](#)
- [Poison Ivy, Oak and Sumac Information Center](#)
- [Poison Ivy information from Canadian Poisonous Plants Information System](#)
- [The American Academy of Dermatology Poison Ivy Page](#)
- [YouTube video from SciShow about PI \(but also related species and mostly about the oil\)](#)

If you like journal articles here is a small sample. The papers by Gladman (2006) and Kim (2019) provide good overview information.

- Allen, P.L. Leaves of three, let them be: if it were only that easy! *Pediatric nursing* Volume 30, Issue 2, March 2004, Pages 129-135 [PubMed ID: 15185735](#)
- Boelman, D.J. Emergency: Treating poison ivy, oak, and sumac. *American Journal of Nursing* Volume 110(6), June 2010, pp 49-52 [PubMed ID: 20505463](#)
- Garner, L.A. Poison ivy, oak, and sumac dermatitis: Identification, treatment, and prevention. *Physician and Sportsmedicine* Volume 27, Issue 5, May 1999, Pages 33-43
- Gladman, Aaron C. Toxicodendron Dermatitis: Poison Ivy, Oak, and Sumac. *Wilderness and Environmental Medicine* Volume 17, Issue 2, 2006, Pages 120-128. [PubMed ID: 16805148](#)
- Guin, J.D. Treatment of toxicodendron dermatitis (poison ivy or poison oak). *Skin therapy letter* Volume 6, Issue 7, April 2001, Pages 3-5 [PubMed ID: 11376396](#)
- McGovern, T.W., Steven R. LaWarre, Is it, or isn't it? Poison Ivy look-a-likes. *American Journal of Contact Dermatitis* Volume 11, Issue 2, 2000, Pages 104-110 [PubMed ID: 10908180](#)
- Tanner, T.L. *Rhus* (toxicodendron) dermatitis. *Primary Care - Clinics in Office Practice* Volume 27, Issue 2, 2000, Pages 493-502 [PubMed ID: 10815057](#)
- Kim, Yesul MD, et al. Poison Ivy, Oak, and Sumac Dermatitis: What Is Known and What Is New?. *Dermatitis: 5/6 2019 - Volume 30 - Issue 3 - p 183-190 [PubMed ID: 31045932](#)*

Synonyms:

- *Rhus radicans* L. var. *rydbergii* (Small ex Rydb.) Rehd.
- *Rhus radicans* L. var. *vulgaris* (Small ex Rydb.) Rehd.
- *Rhus toxicodendron* L. var. *vulgaris* Michx.
- *Toxicodendron crenatum* Mill., nom. utique rej.
- *Toxicodendron desertorum* Lundell
- *Toxicodendron radicans* (L.) Kuntze var. *rydbergii* (Small ex Rydb.) Erskine
- *Toxicodendron volubilis* Mill., nom. utique rej.

Just to cause more confusion Western Poison-Ivy (*Toxicodendron rydbergii*) has been found to hybridize with eastern poison ivy (*Toxicodendron radicans* (L.) Kuntze) - the kind that climbs. Eastern poison ivy has not been found in Manitoba; it has been found in some parts of Minnesota and southern Ontario.

Poison Oak:

Poison Oak does not grow in Manitoba. (yes that is a period, end of discussion, don't bring it up again). On the other hand all of the species look similar, contain the same oil, and cause the same rash - does it matter that much?.

- *Toxicodendron diversilobum* (Torr. & Gray) Greene (Pacific poison oak) is found on the west coast. It is rare in British Columbia only found on the Gulf Islands, southeast Vancouver Island and possibly Howe Sound. Its conservation status is considered 'Imperiled' in BC (S2S3).
- *Toxicodendron pubescens* P. Mill. (Atlantic poison oak) is found in the south eastern United States - on the Atlantic coast.

Some organizations and people use Poison Oak interchangeably with Poison Ivy. Poison Ivy (*Toxicodendron rydbergii*) is extremely variable in size and leaf shape leading many to believe there are different species found in Manitoba. The long and short is these plants should be avoided as they can cause very serious dermatitis.

- [NatureServe does list Toxicodendron rydbergii as Northern Poison Oak](#) . This site also notes that *Toxicodendron rydbergii* more closely resembles poison oak than poison ivy in its upright growth form and lack of aerial rootlets.
- The [Idaho Dept. of Fish and Game also use Northern Poison-oak to reference this species](#). There is no reported observations in their database as of April 2020.
- At least one (out of print) brochure from the Winnipeg Regional Health Authority listed Poison Oak as occurring in Manitoba. In most other documents *Poison Oak* was included in a list of plants that contain urushiol, but not that it actually occurs in Manitoba.

Finally just for fun:

Geocaching: This write-up was created as part of a geocache called [PI in the Woods \(GC15J8G\)](#) on geocache.com. At the cache itself there is a [brief information sheet about poison ivy](#).

[Back to Home Page](#)

If you have any questions or comments please send me email at: burchill@cc.umanitoba.ca

Last modified: Sat April 25 2020

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I currently work as the *Associate Director, Repository* for the [Manitoba Centre for Health Policy](#) in the department of [Community Health Sciences, College of Medicine, Faculty of Health Sciences](#). MCHP is primarily involved with population health, and health and social policy related research. Part of my work at MCHP included teaching an [introduction to SAS](#) programming workshop.

My formal academic training was in Botany (MSc) with experience in plant identification, statistical analysis of ecological communities, field work, and a variety of computer platforms and applications. My graduate studies looked at the vegetation of saline seeps, springs, and soils in western Manitoba (Thesis: *Vegetation-Environment Relationships of an Inland Boreal Salt Pan*). This work provided baseline information for the formation of the [Lake Winnipegosis Salt Flats Ecological Reserve](#). I volunteered for a number of years identifying lichens and mosses in the [UofM Cryptogamic Herbarium \(UofM WIN\)](#), and continue to do a small amount of botanical consulting in community/environmental assessment.



When I am not working at the University of Manitoba I spend my time paddling, teaching canoeing and wilderness awareness/navigation, cycling, working on plant identification/check lists, and giving botanical tours around southern Manitoba. Most of the botanical tours have been done as part of the Nature Manitoba summer and/or Mantario program. I teach [Paddle Canada \(CRCA\)](#) Basic & Lake Canoe courses. [On Wednesday evenings throughout the summer I help organize recreational paddles for Paddle Manitoba.](#)